

Partial Listings



US006510513B1

(12) United States Patent Danieli

(10) Patent No.: US 6,510,513 B1
(45) Date of Patent: Jan. 21, 2003

(54) SECURITY SERVICES AND POLICY ENFORCEMENT FOR ELECTRONIC DATA

EP	0809221	11/1997	G07F/17/16
WO	97/50036	12/1997	G06F/12/14
WO	98/42098	9/1998	H04L9/00

(75) Inventor: Damon V. Danieli, Bellevue, WA (US)

(73) Assignee: Microsoft Corporation, Redmond, WA (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: 09/229,427

(22) Filed: Jan. 13, 1999

(51) Int. Cl.⁷ H04L 9/32; G06F 12/14

(52) U.S. Cl. 713/156; 713/155; 713/160; 713/165; 713/178; 713/193; 705/51; 705/53; 380/279

(58) Field of Search 713/155, 156, 713/160, 164, 165, 166, 167, 175, 176, 178, 179, 181, 193, 201; 705/1, 51, 52, 53; 380/279

(56) References Cited

U.S. PATENT DOCUMENTS

5,638,446 A * 6/1997 Rubin 380/25
6,263,313 B1 * 7/2001 Milsted et al. 705/1

FOREIGN PATENT DOCUMENTS

EP 0737907 10/1996 G06F/1/00

OTHER PUBLICATIONS

"VeriSign Digital ID Center," http://digitalid.verisign.com/id_intro.htm, Jun. 19, 1998, pp. 1-7.

* cited by examiner

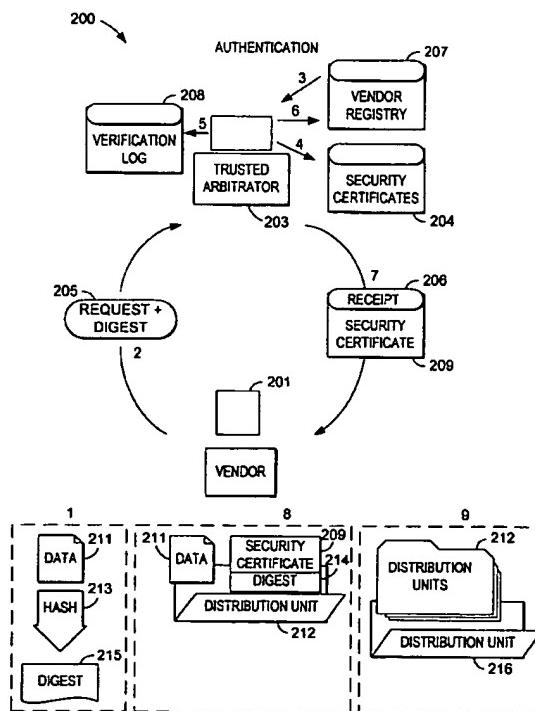
Primary Examiner—Justin T. Darrow

(74) Attorney, Agent, or Firm—Lee & Hayes, PLLC

(57) ABSTRACT

Security services and policy enforcement for electronic data is provided through a series of transactions among a server and clients using electronic security certificates. A first client generates a digest from the electronic data, and submits a security certificate request containing the digest to a trusted arbitrator server, where the request is time stamped and logged. The trusted arbitrator authenticates the first client's credentials and returns the security certificate to the first client. The data and security certificate are combined to create a distribution unit. A second client acquires the distribution unit, extracts the security certificate, and generates a digest from the data. If the digest from the second client matches the logged digest from the first client, the data is valid. Depending on the certificate type and policy level, the trusted arbitrator server provides other services to the clients, such as notification of improper user of the data.

29 Claims, 23 Drawing Sheets



US-PAT-NO: 6510513

DOCUMENT-IDENTIFIER: US 6510513 B1

See image for Certificate of Correction

TITLE: Security services and policy enforcement for electronic
data

----- KWIC -----

Detailed Description Text - DETX (48):

The system level overview of the operation of exemplary embodiments of the invention has been described in this section of the detailed description. A series of transactions among parties that provide security services and policy enforcement for the distribution and use of electronic data has been described. For sake of clarity a simplified version of protecting software applications distributed across the Internet has been described. The invention is not, however, limited to use in distributing computer software across a network but will be immediately perceived as applicable to any exchange of files or documents which must be authenticated or validated in some fashion, such as legal papers, tax filings, employment records, or the like. Furthermore, although the distribution unit used for illustrative purposes in this section contains a single distribution unit, the ability to have multiple distribution units in a distribution unit, or to nest distribution units is also contemplated by the invention.

Current US Original Classification - CCOR (1):

713/156